

10/644,295

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	8	((("6493701") or ("5752025") or ("20020013030") or ("6065011")). PN.	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	OFF	2006/08/20 11:04
L2	8	((("6493701") or ("5752025") or ("20010013030") or ("6065011")). PN.	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	OFF	2006/08/20 11:05
L3	57473	(sort\$4 or categor\$4) same (table\$1 or (column\$1) or (table near column\$1))	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/08/20 11:06
L4	36292	3 and @ad<"20030820"	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/08/20 11:07
L5	13053	4 and (index\$3 or (dynamic near index\$3))	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/08/20 11:07
L6	44	4 and ((dynamic near index\$3))	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/08/20 11:07
L7	19	6 and (sot\$3 or arrang\$3 or ranking)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/08/20 11:08
L8	42	6 and (sort\$3 or arrang\$3 or ranking)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/08/20 11:08

## EAST Search History

L9	20	8 and (monitor\$3)	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/08/20 11:08
L10	0	707/1,3,6,10,100,102	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/08/20 11:09
L11	23441	(707/1,3,6,10,100,102).ccls.	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/08/20 11:09
L12	22	11 and 8	US-PGPUB; USPAT; USOCR; EPO; DERWENT; IBM_TDB	OR	ON	2006/08/20 11:09

Set	Items	Description
S1	851124	COLUMN? ? OR FIELD? ?
S2	6109	(SET OR SETS OR GROUP? ? OR COLLECTION? ?) (3W) S1
S3	12164	(SOME OR SELECTION OR FEW OR NUMBER OR QUANTITY OR SEVERAL- ) (3W) S1
S4	852	(SORT? ? OR SORTED OR SORTING OR ORDER? ? OR ORDERED OR OR- DERING OR ARRANGE? ? OR ARRANGING ) (5N) (S2 OR S3)
S5	80	(CATEGORY?E? ? OR CATEGORI?ING OR CATEGORY OR CATEGORIES OR CATEGORI?ATION OR CLASS OR CLASSES OR CLASSIFICATION OR CLA- SSIFY OR CLASSIFIES OR CLASSIFIED OR CLASSIFYING) (5N) (S2 OR S- 3)
S6	4461	(MARK? ? OR MARKED OR MARKING OR FLAG? ? OR FLAGGED OR FLA- GGING) (10N) S1
S7	89	(INDEX OR INDEXING OR INDEXED) (10N) (S2 OR S3)
S8	711	(MINI OR SECOND OR 2ND OR ANOTHER OR EXTRA OR SUB OR AUXIL- IARY OR SUPPLEMENTARY OR SUB) () INDEX
S9	0	(S4 OR S5) AND S6 AND (S7 OR S8)
S10	14	(S4 OR S5) AND (S7 OR S8)
S11	14	IDPAT (sorted in duplicate/non-duplicate order)
S12	14	IDPAT (primary/non-duplicate records only)

? show files

File 347:JAPIO Nov 1976-2005/Oct(Updated 060203)

(c) 2006 JPO & JAPIO

File 350:Derwent WPIX 1963-2006/UD,UM &UP=200612

(c) 2006 Thomson Derwent

12/5/1 (Item 1 from file: 350)

DIALOG(R)File 350:Derwent WPIX

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015188113 \*\*Image available\*\*

WPI Acc No: 2003-248647/200324

XRPX Acc No: N03-197518

**Classifying binary strings e.g. IP data packets for maintaining servicing level agreements in Internet communications based on IP address specifications in packet headers**

Patent Assignee: NOKIA CORP (OYNO ); EKLUND C (EKLUND-I); HEINER A (HEINER-I)

Inventor: EKLUND C; HEINER A

Number of Countries: 098 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 200321906	A1	20030313	WO 2001EP9960	A	20010829	200324 B
EP 1423957	A1	20040602	EP 2001965229	A	20010829	200436
			WO 2001EP9960	A	20010829	
AU 2001285915	A1	20030318	AU 2001285915	A	20010829	200452
			WO 2001EP9960	A	20010829	
US 20040243563	A1	20041202	WO 2001EP9960	A	20010829	200481
			US 2004488180	A	20040413	

Priority Applications (No Type Date): WO 2001EP9960 A 20010829

Patent Details:

Patent No Kind Lan Pg Main IPC Filing Notes

WO 200321906 A1 E 34 H04L-029/06

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW  
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

EP 1423957 A1 E H04L-029/06 Based on patent WO 200321906

Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR

AU 2001285915 A1 H04L-029/06 Based on patent WO 200321906

US 20040243563 A1 G06F-007/00

Abstract (Basic): WO 200321906 A1

NOVELTY - Involves searching search tree for **several classification fields** based on a matching procedure. An **index** value is obtained in a leaf node of the search tree for each classification field. The index values thus obtained in the searching step are used to derive a policy to be applied to the data packet. The number of index values is reduced by combining intermediate results of the searching with results of the policy derivation.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a network element.

USE - For classification of bit strings e.g. IP data packets on a per-flow basis for maintaining servicing level agreements in Internet communications based on IP address specifications in packet headers.

ADVANTAGE - Improves computational efficiency and reduces memory requirements.

DESCRIPTION OF DRAWING(S) - The drawing shows a block diagram of a router adapted to implement the method.

pp; 34 DwgNo 1/5

Title Terms: CLASSIFY; BINARY; STRING; IP; DATA; PACKET; MAINTAIN; SERVICE; LEVEL; COMMUNICATE; BASED; IP; ADDRESS; SPECIFICATION; PACKET; HEADER

Derwent Class: T01; W01

International Patent Class (Main): G06F-007/00; H04L-029/06

File Segment: EPI

12/5/2 (Item 2 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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012589391 \*\*Image available\*\*  
WPI Acc No: 1999-395498/199933  
Related WPI Acc No: 1999-395493; 1999-395494; 1999-395495; 1999-395496;  
1999-395497; 1999-395500; 1999-395502; 1999-405226  
XRPX Acc No: N99-295598

**Generating database table indexes**

Patent Assignee: LEARMONT T R (LEAR-I); NG T C T (NGTC-I); SUN MICROSYSTEMS  
INC (SUNM ); BAAN DEV BV (BAAN-N)

Inventor: LEARMONT T R; NG T C T

Number of Countries: 084 Number of Patents: 007

**Patent Family:**

Patent No	Kind	Date	Applicat No	Kind	Date	Week
WO 9933002	A1	19990701	WO 98US27243	A	19981221	199933 B
AU 9919389	A	19990712	AU 9919389	A	19981221	199950
EP 1042720	A1	20001011	EP 98964210	A	19981221	200052
			WO 98US27243	A	19981221	
JP 2001527243	W	20011225	WO 98US27243	A	19981221	200204
			JP 2000525838	A	19981221	
EP 1042720	B1	20020403	EP 98964210	A	19981221	200230
			WO 98US27243	A	19981221	
US 6374256	B1	20020416	US 9768415	P	19971222	200232
			US 98106188	A	19980629	
DE 69804673	E	20020508	DE 604673	A	19981221	200238
			EP 98964210	A	19981221	
			WO 98US27243	A	19981221	

Priority Applications (No Type Date): US 98106188 A 19980629; US 9768415 P 19971222

**Patent Details:**

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 9933002	A1	E	36	G06F-017/30	
Designated States (National): AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW					
AU 9919389	A				Based on patent WO 9933002
EP 1042720	A1	E		G06F-017/30	Based on patent WO 9933002
Designated States (Regional): DE FR GB					
JP 2001527243	W		46	G06F-017/30	Based on patent WO 9933002
EP 1042720	B1	E		G06F-017/30	Based on patent WO 9933002
Designated States (Regional): DE FR GB					
US 6374256	B1			G06F-017/30	Provisional application US 9768415
DE 69804673	E			G06F-017/30	Based on patent EP 1042720
					Based on patent WO 9933002

Abstract (Basic): WO 9933002 A1

NOVELTY - Method consists in selecting classes with data to be indexed in the database, determining whether data in the classes correspond to more than one table and generating an index for the data in the **classes** based on the determination. A **set** of **fields** is selected for **indexing** and unique indexes are generated based upon determination of whether they are unique.

DETAILED DESCRIPTION - There are INDEPENDENT CLAIMS for (1) a computer program for configuring a data processor and (2) an index generator.

USE - Method is for creating indexes in a relational database corresponding to classes in an object-oriented application.

DESCRIPTION OF DRAWING(S) - The drawing shows a flowchart of index generation.

pp; 36 DwgNo 11/11  
Title Terms: GENERATE; DATABASE; TABLE; INDEX  
Derwent Class: T01  
International Patent Class (Main): G06F-017/30  
International Patent Class (Additional): G06F-009/44; G06F-012/00  
File Segment: EPI

12/5/3 (Item 3 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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011981591 \*\*Image available\*\*  
WPI Acc No: 1998-398501/199834  
XRPX Acc No: N98-310058

**Multilingual information storing and retrieving method in networked computer system - involves separating data fields into two sets of which second set is maintained in native character set, while first set is translated from native character set to universal character set**

Patent Assignee: MICROSOFT CORP (MICR-N)  
Inventor: BENSON M L; NORIN S; SHAKIB D A  
Number of Countries: 001 Number of Patents: 001  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5778213	A	19980707	US 96678994	A	19960712	199834 B

Priority Applications (No Type Date): US 96678994 A 19960712

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5778213	A		8	G06F-017/30	

Abstract (Basic): US 5778213 A

The method involves receiving from one client station a database record comprising a number of data fields containing data in a native character set for a given language. Then, each data fields are separated into first and second set. The first set includes only those data fields from which the database record is sorted. The second data contains the remaining data field of the data record. The data fields of the second set is then stored into the database such that the second set data is maintained in the native character set.

Then, the data field of first data set is translated into a universal character set and stored the translated data into the database. Then, portion of first **set** of data **fields** is **sorted** to generate **index** based on request from client station for an index of portion of database stored according to user specified language rules. Then, the requested index is transmitted to the client station.

ADVANTAGE - Reduces memory capacity. Reduces burden on client and network administrator. Prevents error created in character set conversion.

Dwg.1/4

Title Terms: INFORMATION; STORAGE; RETRIEVAL; METHOD; COMPUTER; SYSTEM;  
SEPARATE; DATA; FIELD; TWO; SET; SECOND; SET; MAINTAIN; NATIVE; CHARACTER  
; SET; FIRST; SET; TRANSLATION; NATIVE; CHARACTER; SET; UNIVERSAL;  
CHARACTER; SET

Derwent Class: T01

International Patent Class (Main): G06F-017/30

File Segment: EPI

12/5/5 (Item 5 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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011320828 \*\*Image available\*\*  
WPI Acc No: 1997-298732/199728  
XRPX Acc No: N97-246894

**Classifying large volumes of raw data entries according to data patterns  
e.g. for sorting, summarising and reporting - reading data entry records  
group from data entry records, tallying key number of total number of  
key fields in data entry records group, creating index record having  
set number of key fields equal to key number and pointer**

Patent Assignee: SAMPSON W C (SAMP-I)

Inventor: SAMPSON W C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
CA 2183024	A	19970212	CA 2183024	A	19960809	199728 B

Priority Applications (No Type Date): US 95514195 A 19950811

Patent Details:

Patent No	Kind	Lan Pg	Main IPC	Filing Notes
CA 2183024	A	21	G06F-017/40	

Abstract (Basic): CA 2183024 A

Each data entry records group has at least one of the data entry records with at least one key field containing an item. There is a master list of items in the raw data to be indexed. A data entry records group is read and a tally of a key number representing a total number of the key fields in the data entry records group is generated. In **some** cases, the key **fields** are **sorted** in a predetermined sequence, duplicate key fields are removed and the key number is adjusted for the key fields removed.

An **index** record having a predetermined **number** of key **fields** equal to the key number and a first pointer related to instructions for processing any other data entry records group having the same combination of key fields is generated. Each item in the key fields of the data entry records group is mapped to generate a corresponding item indicator in the key fields of the index record. If the index record matches an existing index record, the instructions related to the first pointer are executed. If the index record is new, a second pointer is added related to a location of the data entry records group in the data entry records.

USE/ADVANTAGE - For indexing data entry records groups in raw data entry records. P1 pointer in each index record allows programmer to specify program action for given patterns of data using additional instructions to simplify some programs.

Dwg.4/4

Title Terms: CLASSIFY; VOLUME; RAW; DATA; ENTER; ACCORD; DATA; PATTERN;  
SORT; SUMMARY; REPORT; READ; DATA; ENTER; RECORD; GROUP; DATA; ENTER;  
RECORD; KEY; NUMBER; TOTAL; NUMBER; KEY; FIELD; DATA; ENTER; RECORD;  
GROUP; INDEX; RECORD; SET; NUMBER; KEY; FIELD; EQUAL; KEY; NUMBER; POINT

Derwent Class: T01

International Patent Class (Main): G06F-017/40

International Patent Class (Additional): G06F-007/08

File Segment: EPI



12/5/7 (Item 7 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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009770563 \*\*Image available\*\*  
WPI Acc No: 1994-050414/199407  
Related WPI Acc No: 1992-383947  
XRPX Acc No: N94-039730

**Computer entity-relation database method for monitored mfg. process -  
using linked list to define relationship between data elements between  
each of predefined sets and retrieving all of elements of any selected  
predefined set from two entity fields**

Patent Assignee: AUTOMATED TECHNOLOGY ASSOC INC (AUTO-N); PRAEDICTUS CORP  
(PRAE-N)

Inventor: LAYDEN D J; LAYDEN J E; PEARSON T A  
Number of Countries: 021 Number of Patents: 010  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 583108	A2	19940216	EP 93305969	A	19930728	199407 B
AU 9344311	A	19940203	AU 9344311	A	19930729	199411
CA 2100599	A	19940131	CA 2100599	A	19930715	199416
EP 583108	A3	19940608	EP 93305969	A	19930728	199526
AU 664763	B	19951130	AU 9344311	A	19930729	199604
US 5560006	A	19960924	US 91700548	A	19910515	199644
			US 92922491	A	19920730	
			US 95436786	A	19950508	
MX 186404	B	19971014	MX 934557	A	19930728	199901
CA 2100599	C	20001017	CA 2100599	A	19930715	200058
EP 583108	B1	20020123	EP 93305969	A	19930728	200207
DE 69331483	E	20020314	DE 631483	A	19930728	200226
			EP 93305969	A	19930728	

Priority Applications (No Type Date): US 92922491 A 19920730; US 91700548 A  
19910515; US 95436786 A 19950508

Cited Patents: No-SR.Pub; 5.Jnl.Ref; EP 114944; EP 389151

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 583108	A2	E	25	G06F-015/40	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
AU 9344311	A			G06F-015/40	
CA 2100599	A			G06F-015/46	
EP 583108	A3			G06F-015/40	
AU 664763	B			G06F-015/40	Previous Publ. patent AU 9344311
US 5560006	A		18	G06F-017/30	CIP of application US 91700548 Cont of application US 92922491 CIP of patent US 5339257
MX 186404	B			G06F-015/040	
CA 2100599	C E			G06F-015/40	
EP 583108	B1 E			G06F-017/30	
Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE					
DE 69331483	E			G06F-017/30	Based on patent EP 583108

Abstract (Basic): EP 583108 A

The method of handling pre-defined sets of related information involves constructing a database including a number of entity fields, and adding data elements to the database such that elements of each of the predefined sets are located in at least two of the entity fields. Then, associating with each element of a second entity field an address for a first and a last related element in a first entity field the set of all such addresses for these elements forming together a head of a linked list. Next, associating with each element of the first entity field addresses for the next related and previous elements. The set of all such addresses for the

next and previous related elements forms a continuation of a linked list.

Then, indexing the data elements in at least the second entity field in an order related to a selected characteristic of the data elements within the indexed entity field. Finally, retrieving a selected one of the predefined sets of elements from the entity fields using a binary search.

ADVANTAGE - Can complete data access and retrieval in every instance, and even in worst case operates within chosen time limit.

Dwg.2/2

Title Terms: COMPUTER; ENTITY; RELATED; DATABASE; METHOD; MONITOR;  
MANUFACTURE; PROCESS; LINK; LIST; DEFINE; RELATED; DATA; ELEMENT;  
PREDEFINED; SET; RETRIEVAL; ELEMENT; SELECT; PREDEFINED; SET; TWO; ENTITY  
; FIELD

Derwent Class: T01

International Patent Class (Main): G06F-015/040; G06F-015/40; G06F-015/46;  
G06F-017/30

International Patent Class (Additional): G06F-012/008; G06F-012/08;  
G06F-015/020; G06F-015/419

File Segment: EPI

12/5/8 (Item 8 from file: 350)  
DIALOG(R)File 350:Derwent WPIX  
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009375457 \*\*Image available\*\*  
WPI Acc No: 1993-068935/199309  
XRPX Acc No: N93-052911

**Data processing system for execution of outer join operations - responds to values in selected set of columns of outer table, to determine number of responsible regions of inner table**

Patent Assignee: INT BUSINESS MACHINES CORP (IBMC )  
Inventor: CHENG J; MOHAN C; PIRAHESH M H  
Number of Countries: 001 Number of Patents: 004  
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 529916	A2	19930303	EP 92307535	A	19920818	199309 B
EP 529916	A3	19931020	EP 92307535	A	19920818	199510
US 5551031	A	19960827	US 91749088	A	19910823	199640
			US 94325942	A	19941019	
			US 95487300	A	19950607	
US 5557791	A	19960917	US 91749088	A	19910823	199643
			US 94325942	A	19941019	

Priority Applications (No Type Date): US 91749088 A 19910823

Cited Patents: No-SR.Pub; 3.Jnl.Ref; EP 421408

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 529916	A2	E	24	G06F-015/40	
US 5551031	A		26	G06F-017/30	Cont of application US 91749088
					Div ex application US 94325942
US 5557791	A		27	G06F-017/30	Cont of application US 91749088
EP 529916	A3			G06F-015/40	

Abstract (Basic): EP 529916 A

The system has a device for storing tables consisting of a number of tuples having multiple columns. An outer join operation is performed on two such tables, one table being an inner table and the other an outer. The outer table is ordered or **indexed** in a **sorted** sequence on a selected **set** of **columns**.

A device, responsive to values in the selected set of columns, determine a number of responsibility regions in the inner table such that every tuple in the inner table belongs to one and only one region. The tuples of the inner table are processed in each responsibility region by outputting all tuples which belong to the region.

ADVANTAGE - Is capable of outputting all tuples of inner table in output of join operation without requiring sorting of inner table.

Dwg. 2/3

Title Terms: DATA; PROCESS; SYSTEM; EXECUTE; OUTER; JOIN; OPERATE; RESPOND; VALUE; SELECT; SET; COLUMN; OUTER; TABLE; DETERMINE; NUMBER; RESPONSIBLE; REGION; INNER; TABLE

Derwent Class: T01

International Patent Class (Main): G06F-015/40

File Segment: EPI

Set	Items	Description
S1	1094821	COLUMN? ? OR FIELD? ?
S2	18822	(SET OR SETS OR GROUP? ? OR COLLECTION? ?) (3W) S1
S3	35770	(SOME OR SELECTION OR FEW OR NUMBER OR QUANTITY OR SEVERAL- ) (3W) S1
S4	1869	(SORT? ? OR SORTED OR SORTING OR ORDER? ? OR ORDERED OR ORDERING OR ARRANGE? ? OR ARRANGING ) (5N) (S2 OR S3)
S5	590	(CATEGORY?E? ? OR CATEGORY?ING OR CATEGORY OR CATEGORIES OR CATEGORY?ATION OR CLASS OR CLASSES OR CLASSIFICATION OR CLASSIFY OR CLASSIFIES OR CLASSIFIED OR CLASSIFYING) (5N) (S2 OR S-3)
S6	15949	(MARK? ? OR MARKED OR MARKING OR FLAG? ? OR FLAGGED OR FLAGGING) (10N) S1
S7	794	(INDEX OR INDEXING OR INDEXED) (10N) (S2 OR S3)
S8	2044	(MINI OR SECOND OR 2ND OR ANOTHER OR EXTRA OR SUB OR AUXILIARY OR SUPPLEMENTARY OR SUB) () INDEX
S9	4	(S4 OR S5) (30N) S6 (30N) (S7 OR S8)
S10	4	IDPAT (sorted in duplicate/non-duplicate order)
S11	4	IDPAT (primary/non-duplicate records only)
S12	26	(S4 OR S5) (30N) (S7 OR S8)
S13	23	S12 NOT S11
S14	23	IDPAT (sorted in duplicate/non-duplicate order)
S15	22	IDPAT (primary/non-duplicate records only)

File 348:EUROPEAN PATENTS 1978-2006/Feb W02  
(c) 2006 European Patent Office  
File 349:PCT FULLTEXT 1979-2006/UB=20060216,UT=20060209  
(c) 2006 WIPO/Univentio

15/5,K/1 (Item 1 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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01914096

**A client-server system and a method to customize a user application for accessing a database**

**Client-Server-System und Verfahren zur Anpassung von Anwenderprogrammen zum Zugriff von einer Datenbank**

**Systeme client-serveur et procede pour la personnalisation d'une application d'accès a une base de données**

PATENT ASSIGNEE:

SAP Aktiengesellschaft, (2635751), Neurottstrasse 16, 69190 Walldorf, (DE), (Applicant designated States: all)

INVENTOR:

Steinmaier, Carola, Schriesheimerstrasse 27a, 69221 Dossenheim, (DE)

Brinkmoller, Bernhard, Lederschenstrasse 48, 69168 Wiesloch, (DE)

LEGAL REPRESENTATIVE:

Hossle Kudlek & Partner (101842), Patentanwalte, Postfach 10 23 38, 70019 Stuttgart, (DE)

PATENT (CC, No, Kind, Date): EP 1544750 A1 050622 (Basic)

APPLICATION (CC, No, Date): EP 2003029402 031219;

DESIGNATED STATES: AT; BE; BG; CH; CY; CZ; DE; DK; EE; ES; FI; FR; GB; GR; HU; IE; IT; LI; LU; MC; NL; PT; RO; SE; SI; SK; TR

EXTENDED DESIGNATED STATES: AL; LT; LV; MK

INTERNATIONAL PATENT CLASS (V7): G06F-017/30

ABSTRACT EP 1544750 A1

A method for setting up a customizable client-server system (10) comprising one of the two steps of custom selecting search data fields from a proposed variety of selectable search data fields in order to create a user interface search mask and of custom selecting archive fields from a proposed variety of selectable archive fields of an archive database (20), the method further comprising the step of performing an automatic linking procedure between a. the fields selected during said step of custom selecting from one of the two varieties of selectable fields and b. the whole of the variety of the respective other one of the two varieties of selectable fields in order to identify and automatically generate a list of corresponding respective fields of the other one of the two varieties.

ABSTRACT WORD COUNT: 132

NOTE:

Figure number on first page: 3

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 050622 A1 Published application with search report

Change: 050803 A1 Inventor information changed: 20050616

Assignee: 051221 A1 Transfer of rights to new applicant: SAP AG  
(7139610) Dietmar-Hopp-Allee 16 69190 Walldorf  
DE

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200525	1146
SPEC A	(English)	200525	1965
Total word count - document A			3111
Total word count - document B			0
Total word count - documents A + B			3111

...CLAIMS client-server system wherein an automatic linking procedure is performed on the basis of a custom **selection** of data **fields** in **order** to create an archive **index** structure corresponding to said **selection** of data **fields** .

26. A method for generating a user interface set-up for archive data retrieval in...

...server system wherein an automatic linking procedure is performed on the basis of a customized **selection** of archive **index fields** in **order** to create a user interface screen set-up corresponding to said selection of archive index...

15/5,K/3 (Item 3 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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01566388

**Partitioned database system**  
**Partitioniertes Datenbanksystem**  
**Système partitionné de base de données**

PATENT ASSIGNEE:

NCR INTERNATIONAL INC., (1449480), 1700 South Patterson Boulevard,  
Dayton, Ohio 45479, (US), (Applicant designated States: all)

INVENTOR:

Sinclair, Paul L., 1825 John St., Manhattan Beach, CA 90266, (US)  
Cohen, Steven B., 1706 Haynes Lane, Redondo Beach, CA 90278, (US)  
Pederson, Donald R., 12410 Pathos Lane, San Diego, CA 92129, (US)

LEGAL REPRESENTATIVE:

Williamson, Brian et al (84717), NCR Limited International Patent  
Department 206 Marylebone Road, London NW1 6LY, (GB)

PATENT (CC, No, Kind, Date): EP 1302873 A2 030416 (Basic)

EP 1302873 A3 041027

APPLICATION (CC, No, Date): EP 2002256960 021008;

PRIORITY (CC, No, Date): US 981613 011016

DESIGNATED STATES: DE; FR; GB

EXTENDED DESIGNATED STATES: AL; LT; LV; MK; RO; SI

INTERNATIONAL PATENT CLASS (V7): G06F-017/30

ABSTRACT EP 1302873 A2

Implementations of a partitioned database system and a method of using a database system are disclosed. One system implementation includes storage facilities. Each storage facility includes data from database table rows. The database table rows in each storage facility that correspond to a specific database table are logically ordered according to a row identifier (row ID). The row ID includes a first value that is based on one or more columns of the table. The row ID also includes a second value that is based on one or more columns of the table, which may be different from or the same as those on which the first value is based. The first value of the row ID is predominate in determining the order of the rows in the storage facilities. The second value determines the order of those rows with identical first values.

ABSTRACT WORD COUNT: 144

NOTE:

Figure number on first page: 2

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 030416 A2 Published application without search report

Change: 040825 A2 Legal representative(s) changed 20040706

Change: 040825 A2 Legal representative(s) changed 20040706

Search Report: 041027 A3 Separate publication of the search report

Change: 041208 A2 Legal representative(s) changed 20041019

Examination: 050622 A2 Date of request for examination: 20050427

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	200316	597
SPEC A	(English)	200316	3752
Total word count - document A			4349
Total word count - document B			0
Total word count - documents A + B			4349

...SPECIFICATION a certain column falls. For example, if an order table in a database has the **order number column** as that table's primary **index**, the partition function can correspond to the month of the order date. In that situation...

15/5,K/4 (Item 4 from file: 348)

DIALOG(R)File 348:EUROPEAN PATENTS

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01064378

METHOD AND APPARATUS FOR CREATING INDEXES IN A RELATIONAL DATABASE  
CORRESPONDING TO CLASSES IN AN OBJECT-ORIENTED APPLICATION

VERFAHREN UND SYSTEM ZUM ERSTELLEN VON INDIZIEN, DIE KLASSEN EINER  
OBJEKT-ORIENTIERTEN ANWENDUNG ENTSPRECHEN, IN EINER RELATIONALEN  
DATENBANK

PROCEDE ET APPAREIL DE CREATION D'INDEX DANS UNE BASE DE DONNEES  
RELATIONNELLE CORRESPONDANT A DES CLASSES D'UNE APPLICATION ORIENTEE  
OBJET

PATENT ASSIGNEE:

Sun Microsystems, Inc., (2616582), 901 San Antonio Road, M/S UPAL01-521,  
Palo Alto, California 94303, (US), (Proprietor designated states: all)

INVENTOR:

NG, Tony Chun Tung, 3716 Harlequin Terrace, Fremont, CA 94555, (US)

LEARMONT, Timothy R., 343 Tennessee Lane, Palo Alto, CA 94306, (US)

LEGAL REPRESENTATIVE:

Chameroy, Claude et al (14591), c/o Cabinet Malemont 42, avenue du  
President Wilson, 75116 Paris, (FR)

PATENT (CC, No, Kind, Date): EP 1042720 A1 001011 (Basic)

EP 1042720 B1 020403

WO 9933002 990701

APPLICATION (CC, No, Date): EP 98964210 981221; WO 98US27243 981221

PRIORITY (CC, No, Date): US 68415 P 971222; US 106188 980629

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-017/30

CITED PATENTS (EP B): WO 95/03586 A; WO 97/03406 A; US 5291583 A

CITED PATENTS (WO A): WO 9503586 A ; US 5291583 A ; WO 9703406 A

NOTE:

No A-document published by EPO

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 001011 A1 Published application with search report

Application: 990825 A1 International application. (Art. 158(1))

Oppn None: 030326 B1 No opposition filed: 20030106

Change: 010816 A1 Title of invention (German) changed: 20010625

Change: 001025 A1 Inventor information changed: 20000907

Assignee: 001025 A1 Transfer of rights to new applicant: Sun  
Microsystems, Inc. (2616582) 901 San Antonio  
Road, M/S UPAL01-521 Palo Alto, California  
94303 US

Examination: 001011 A1 Date of request for examination: 20000724

Examination: 010314 A1 Date of dispatch of the first examination  
report: 20010130

Grant: 020403 B1 Granted patent

Application: 990825 A1 International application entering European  
phase

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text Language Update Word Count

CLAIMS B (English) 200214 1157

CLAIMS B (German) 200214 1219

CLAIMS B (French) 200214 1324

SPEC B (English) 200214 6428

Total word count - document A 0

Total word count - document B 10128

Total word count - documents A + B 10128

...SPECIFICATION in an index group and lets tool 508 locate the  
corresponding columns and tables to **index** in the database by  
specifying. The **collection** of **fields** in the **class** or **classes**  
selected for **indexing** is called an **index** group. Generally, the user



specifies an **index group** based on the **fields** commonly searched or accessed by an object-oriented application.

In the past, a conventional object...

...be indexed (state 1104). In one implementation consistent with the present invention, fields used for **indexing** are stored in a **index group**. Generally, the **index group** includes **fields** from a **class** or **classes** that are commonly searched or accessed.

Tool 508 determines if fields in the index group...

...CLAIMS generated indexes being based on the determination.

2. The method in claim 1 wherein selecting **classes** (506) further comprises selecting a **set of fields** in the **classes** (506) for **indexing**.

3. The method in claim 2 wherein determining further comprises checking whether the selected **set of fields** in the **classes** (506) correspond to columns in more than one table of the database (502).

4. The...

...7, wherein the processor (508) selects classes (506) and is further configured to select a **set of fields** in the **classes** for **indexing**.

9. The system of claim 8, wherein the processor (508) is further configured to check whether the selected **set of fields** in the **classes** (502) correspond to columns in more than one table of the database (502).

10. The...

...computer program product in claim 13 wherein selecting classes (504) further comprises the selecting a **set of fields** in the **classes** (502) configured to **index**.

15. The computer program product in claim 14 wherein determining further comprises checking whether the selected **set of fields** in the **classes** (504) correspond to columns in more than one table of the database (502).

16. The a **set of fields** in the **classes** (506) for **indexing**.

21. The apparatus in claim 20 wherein the means for determining further comprises a means for checking whether the selected **set of fields** in the **classes** (506) correspond to columns in more than one table of the database (502).

22. The...

15/5,K/6 (Item 6 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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00774426

Remote duplicate database facility with database replication support for  
online line DDL operations

Ferndatenbankverdopplungsvorrichtung mit Unterstutzung zur Datenbankverviel  
faltigung fur Online-DDL-Operationen

Dispositif de duplication a distance de base de donnees avec support de  
replication de base de donnees pour des operations DDL online

PATENT ASSIGNEE:

Compaq Computer Corporation, (687790), 20555 S.H. 249, Houston, Texas  
77070-2698, (US), (Proprietor designated states: all)

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Garrard, Brian, The Orchard, Ferbies, Speldhurst, Kent, TN3 ONS, (GB)  
Mosher, Malcolm, Jr., 14651 Golf Links Drive, Los Gatos, California 95030  
, (US)

LEGAL REPRESENTATIVE:

Cross, Rupert Edward Blount et al (42891), BOULT WADE TENNANT, Verulam  
Gardens 70 Gray's Inn Road, London WC1X 8BT, (GB)

PATENT (CC, No, Kind, Date): EP 724223 A1 960731 (Basic)  
EP 724223 B1 010725

APPLICATION (CC, No, Date): EP 96300437 960123;

PRIORITY (CC, No, Date): US 377152 950124; US 377881 950124

DESIGNATED STATES: DE; FR; GB; IT; SE

INTERNATIONAL PATENT CLASS (V7): G06F-017/30

CITED PATENTS (EP B): EP 600457 A; US 4875159 A

ABSTRACT EP 724223 A1

A local computer system has a local database, application programs that  
modify the local database, and a transaction manager that stores audit  
records in a local audit trail reflecting those application program  
modifications to the local database. A remotely located computer system  
has a backup database. A remote data duplication facility (RDF)  
maintains virtual synchronization of the backup database with the local  
database. The RDF includes an extractor process executed by the local  
computer system, and a receiver process and a plurality of updater  
processes executed by the remote computer system. The extractor process  
extracts audit records from the local audit trail and transmits those  
records to the receiver process. The receiver distributes the received  
audit records to a plurality of image trail files in the remote computer  
system for processing by updater processes, which initiate redo  
operations of database modifications denoted in at least a subset of the  
audit records against the backup database. A catalog manager on the local  
computer system performs online database restructurings while application  
programs continue to modify the database. The transaction manager stores  
a Stop Updaters audit record in the local audit trail when each online  
database restructuring successfully completes. The extractor process  
transmits the Stop Updaters audit record to the remote computer system  
and the receiver process moves a copy each received Stop Updaters audit  
record into all of the image trails. Finally, each updater process stops  
execution when it reads a Stop Updaters audit record in its assigned  
image trail file. (see image in original document)

ABSTRACT WORD COUNT: 283

NOTE:

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Assignee: 001129 A1 Transfer of rights to new applicant: Compaq  
Computer Corporation (687790) 20555 S.H. 249  
Houston, Texas 77070-2698 US

Examination: 20000216 A1 Date of dispatch of the first examination  
report: 20000105  
Oppn None: 020717 B1 No opposition filed: 20020426  
Grant: 010725 B1 Granted patent  
Change: 001129 A1 Legal representative(s) changed 20001011  
Lapse: 020130 B1 Date of lapse of European Patent in a  
contracting state (Country, date): SE  
20011025,  
Application: 960731 A1 Published application (A1with Search Report  
;A2without Search Report)  
Examination: 970319 A1 Date of filing of request for examination:  
970116

LANGUAGE (Publication,Procedural,Application): English; English; English  
FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPAB96	906
CLAIMS B	(English)	200130	2095
CLAIMS B	(German)	200130	1748
CLAIMS B	(French)	200130	2651
SPEC A	(English)	EPAB96	13847
SPEC B	(English)	200130	14124
Total word count - document A			14755
Total word count - document B			20618
Total word count - documents A + B			35373

...SPECIFICATION path to the database table by ordering data according to the values in any specified **set** of **columns** . That **ordering** is represented by an "Alternate **Index** ," which is typically implemented as a separate data structure from the associated database

...SPECIFICATION path to the database table by ordering data according to the values in any specified **set** of **columns** . That **ordering** is represented by an "Alternate **Index** ," which is typically implemented as a separate data structure from the associated database table.  
Figure...

15/5,K/7 (Item 7 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2006 European Patent Office. All rts. reserv.

00773090

**Relational database system and method with high data availability during table data restructuring**

**Relationales Datenbanksystem und Verfahren mit grosser Verfu'gbarkeit der Daten bei der Umstrukturierung von Tabellendaten**

**Syste'me de gestion de base de donne'es relationnelle et procede avec grande disponibilite de donne'es pendant la restructuration de tables**

PATENT ASSIGNEE:

Compaq Computer Corporation, (687790), 20555 S.H. 249, Houston, Texas  
77070-2698, (US), (Proprietor designated states: all)

INVENTOR:

Maier, Donald S., 2251 Middletown Drive, Campbell, California 95008, (US)

Marton, Roberta S., 48276 Cottonwood Street, Fremont, California 94539,  
(US)

Troisi, James H., 837 Orange Avenue, Sunnyvale, California 94087, (US)

Celis, Pedro, (NMI), 6607 Rain Creek Parkway, Austin, Texas 78759-6123,  
(US)

LEGAL REPRESENTATIVE:

Cross, Rupert Edward Blount et al (42891), BOULT WADE TENNANT, Verulam  
Gardens 70 Gray's Inn Road, London WC1X 8BT, (GB)

PATENT (CC, No, Kind, Date): EP 723238 A1 960724 (Basic)  
EP 723238 B1 010919

APPLICATION (CC, No, Date): EP 96300429 960123;

PRIORITY (CC, No, Date): US 377758 950123

DESIGNATED STATES: DE; FR; GB; IT; SE

INTERNATIONAL PATENT CLASS (V7): G06F-017/30

CITED PATENTS (EP B): EP 306197 A; EP 560543 A

CITED REFERENCES (EP B):

INTELLECTUAL LEVERAGE, SAN FRANCISCO, FEB. 25 - MAR. 1, 1991, no. CONF.  
36, 25 February 1991, INSTITUTE OF ELECTRICAL AND ELECTRONICS  
ENGINEERS, pages 105-109, XP000293859 LESLIE H: "OPTIMIZING PARALLEL  
QUERY PLANS AND EXECUTION";

ABSTRACT EP 723238 A1

A database computer system includes memory, residing in a plurality of interconnected computer nodes, for storing database tables. Each database table has a plurality of columns, a primary key index based on a specified subset of the columns, and an associated table schema. At least a subset of the database tables are partitioned into a plurality of partitions, each partition storing records having primary key values in a primary key range distinct from the other partitions. A transaction manager generates and stores an audit trail, each audit entry denoting a database table record event, such as an addition, deletion or alteration of a specified database table record in a specified one of said database tables. Four online data definition procedures allow the structure of a database table to be altered while the database table remains available to execution of transactions, with minimal impact of the availability of the database table for transaction execution. The four online data definition procedures are a move partition procedure, a split partition procedure, a move partition boundary procedure, and a create new index procedure. Each of these online procedures has three or four phases of execution. In a first phase, records of a table partition or the entire table are accessed using read only access, so as to generate a new partition, move records between two partitions, or to create a new index. In a second phase, audit trail entries are used to clean up the data structures created during the first phase. In a third phase, access to the database table is briefly locked while audit trail entries created after the second phase are used to make final changes to the data structures created during the first phase, and while the database table schema is updated to reflect the changes to the database table

produced. (see image in original document)

ABSTRACT WORD COUNT: 338

NOTE:

Figure number on first page: 1

LEGAL STATUS (Type, Pub Date, Kind, Text):

Change: 000823 A1 Title of invention (German) changed: 20000706

Examination: 20000112 A1 Date of dispatch of the first examination  
report: 19991129

Lapse: 040414 B1 Date of lapse of European Patent in a  
contracting state (Country, date): SE  
20011219,

Grant: 010919 B1 Granted patent

Change: 001004 A1 Title of invention (French) changed: 20000811

Change: 001004 A1 Title of invention (German) changed: 20000811

Change: 000823 A1 Title of invention (French) changed: 20000706

Assignee: 001129 A1 Transfer of rights to new applicant: Compaq  
Computer Corporation (687790) 20555 S.H. 249  
Houston, Texas 77070-2698 US

Change: 001129 A1 Legal representative(s) changed 20001011

Oppn None: 020911 B1 No opposition filed: 20020620

Application: 960724 A1 Published application (A1with Search Report  
;A2without Search Report)

Examination: 970312 A1 Date of filing of request for examination:  
970108

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
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CLAIMS A	(English)	EPAB96	1030
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CLAIMS B	(English)	200138	2545
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CLAIMS B	(German)	200138	2415
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CLAIMS B	(French)	200138	3253
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SPEC A	(English)	EPAB96	7503
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SPEC B	(English)	200138	7708
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Total word count - document A			8534
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Total word count - document B			15921
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Total word count - documents A + B			24455
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...SPECIFICATION path to the database table by ordering data according to the values in any specified **set** of **columns**. That **ordering** is represented by an "Alternate **Index**," which is typically implemented as a separate data structure from the associated database table.  
Figure...

...SPECIFICATION path to the database table by ordering data according to the values in any specified **set** of **columns**. That **ordering** is represented by an "Alternate **Index**," which is typically implemented as a separate data structure from the associated database table.  
Figure...

15/5,K/9 (Item 9 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
(c) 2006 European Patent Office. All rts. reserv.

00599850

**Entity-relation database**

**Entity-relation Datenbank**

**Base de donnees du type a relations entre entites**

**PATENT ASSIGNEE:**

AUTOMATED TECHNOLOGY ASSOCIATES Inc., (1502231), 8888 Keystone Crossing,  
Suite 600, Indianapolis, Indiana 46240, (US), (Proprietor designated  
states: all)

**INVENTOR:**

Layden, John E., 8829 Green Branch Lane, Indianapolis, Indiana 46256,  
(US)

Pearson, Thomas A., 9818 Gulfstream Court, Fishers, Indiana 46038, (US)

Layden, David J., 10410 East 79th Street, Indianapolis, Indiana 46236,  
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**LEGAL REPRESENTATIVE:**

Adkins, Michael et al (42842), Withers & Rogers, Goldings House, 2 Hays  
Lane, London SE1 2HW, (GB)

PATENT (CC, No, Kind, Date): EP 583108 A2 940216 (Basic)  
EP 583108 A3 940608  
EP 583108 B1 020123

APPLICATION (CC, No, Date): EP 93305969 930728;

PRIORITY (CC, No, Date): US 922491 920730

DESIGNATED STATES: AT; BE; CH; DE; DK; ES; FR; GB; GR; IE; IT; LI; LU; MC;  
NL; PT; SE

INTERNATIONAL PATENT CLASS (V7): G06F-017/30; G06F-012/08

CITED PATENTS (EP A): EP 389151 A; EP 114944 A

CITED PATENTS (EP B): EP 114944 A; EP 389151 A

**CITED REFERENCES (EP A):**

IBM TECHNICAL DISCLOSURE BULLETIN vol. 20, no. 7, December 1977, NEW  
YORK US pages 2829 - 2831 D. CHOY ET AL. 'Mechanism for generating  
unclustered link structures in a relational database system'

CONFERENCE ON ENTITY-RELATIONSHIP APPROCH TO SYSTEMS ANALYSIS AND DESIGN  
10 December 1979, LOS ANGELES, US page 379 P. TING ET AL. 'An entity  
relationship model based on linked relations'

IBM TECHNICAL DISCLOSURE BULLETIN vol. 31, no. 6, November 1988, NEW  
YORK US pages 328 - 330 'Root Table - Sub Table concept in panels'

IEEE TRANSACTIONS ON SOFTWARE ENGINEERING vol. 15, no. 9, September 1989  
, NEW YORK US pages 1120 - 1129 A. MALHOTRA ET AL. 'An  
Entity-Relationship Programming Language'

ACM TRANSACTIONS ON DATABASE SYSTEMS vol. 9, no. 4, December 1984, NEW  
YORK US pages 503 - 525 K. ELHARDT ET AL. 'A Database Cache for High  
Performance and Fast Restart in Database Systems';

**CITED REFERENCES (EP B):**

IBM TECHNICAL DISCLOSURE BULLETIN vol. 20, no. 7, December 1977, NEW  
YORK US pages 2829 - 2831 D. CHOY ET AL. 'Mechanism for generating  
unclustered link structures in a relational database system'

CONFERENCE ON ENTITY-RELATIONSHIP APPROCH TO SYSTEMS ANALYSIS AND DESIGN  
10 December 1979, LOS ANGELES, US page 379 P. TING ET AL. 'An entity  
relationship model based on linked relations'

IBM TECHNICAL DISCLOSURE BULLETIN vol. 31, no. 6, November 1988, NEW  
YORK US pages 328 - 330 'Root Table - Sub Table concept in panels'

IEEE TRANSACTIONS ON SOFTWARE ENGINEERING vol. 15, no. 9, September 1989  
, NEW YORK US pages 1120 - 1129 A. MALHOTRA ET AL. 'An  
Entity-Relationship Programming Language'

ACM TRANSACTIONS ON DATABASE SYSTEMS vol. 9, no. 4, December 1984, NEW  
YORK US pages 503 - 525 K. ELHARDT ET AL. 'A Database Cache for High  
Performance and Fast Restart in Database Systems';

**ABSTRACT EP 583108 A2**

An entity-relation database is disclosed to include a plurality of  
entity fields containing arrays of data elements, the data elements being

related to each other in predefined sets, with each predefined set including data elements in at least two of the entity fields. At least one linked list defines the relationship between data elements between each of the predefined sets and provides a means for retrieving all of the elements of any selected predefined set from the two entity fields. The linked list consists of two distinct portions, namely, a head portion associated with each member of one entity field and a continuation portion associated with each member of another entity field, while each entry consists of a pair of addresses thereby forming a doubly linked list.

ABSTRACT WORD COUNT: 129

NOTE:

Figure number on first page: NONE

LEGAL STATUS (Type, Pub Date, Kind, Text):

Change:	000920	A2	International Patent Classification changed: 20000803
Application:	940216	A2	Published application (A1with Search Report ;A2without Search Report)
Lapse:	040922	B1	Date of lapse of European Patent in a contracting state (Country, date): AT 20020123, BE 20020123, CH 20020123, LI 20020123, DE 20020424, DK 20020423, ES 20020730, GR 20020123, IE 20020729, LU 20020728, NL 20020123, PT 20020423, SE 20020423,
Lapse:	031105	B1	Date of lapse of European Patent in a contracting state (Country, date): AT 20020123, BE 20020123, CH 20020123, LI 20020123, DE 20020424, DK 20020423, GR 20020123, IE 20020729, NL 20020123, PT 20020423, SE 20020423,
Lapse:	030723	B1	Date of lapse of European Patent in a contracting state (Country, date): AT 20020123, BE 20020123, CH 20020123, LI 20020123, DE 20020424, GR 20020123, NL 20020123, PT 20020423, SE 20020423,
Lapse:	030226	B1	Date of lapse of European Patent in a contracting state (Country, date): AT 20020123, BE 20020123, CH 20020123, LI 20020123, NL 20020123, PT 20020423, SE 20020423,
Lapse:	030205	B1	Date of lapse of European Patent in a contracting state (Country, date): BE 20020123, CH 20020123, LI 20020123, PT 20020423, SE 20020423,
Lapse:	030102	B1	Date of lapse of European Patent in a contracting state (Country, date): CH 20020123, LI 20020123, SE 20020423,
Grant:	020123	B1	Granted patent
Change:	001102	A2	Title of invention (German) changed: 20000912
Lapse:	020911	B1	Date of lapse of European Patent in a contracting state (Country, date): SE 20020423,
Oppn None:	030115	B1	No opposition filed: 20021024
Lapse:	030219	B1	Date of lapse of European Patent in a contracting state (Country, date): BE 20020123, CH 20020123, LI 20020123, NL 20020123, PT 20020423, SE 20020423,
Lapse:	030507	B1	Date of lapse of European Patent in a contracting state (Country, date): AT 20020123, BE 20020123, CH 20020123, LI 20020123, GR 20020123, NL 20020123, PT 20020423, SE 20020423,
Lapse:	031015	B1	Date of lapse of European Patent in a

contracting state (Country, date): AT  
 20020123, BE 20020123, CH 20020123, LI  
 20020123, DE 20020424, GR 20020123, IE  
 20020729, NL 20020123, PT 20020423, SE  
 20020423,

Lapse: 040121 B1 Date of lapse of European Patent in a  
 contracting state (Country, date): AT  
 20020123, BE 20020123, CH 20020123, LI  
 20020123, DE 20020424, DK 20020423, ES  
 20020730, GR 20020123, IE 20020729, NL  
 20020123, PT 20020423, SE 20020423,

Search Report: 940608 A3 Separate publication of the European or  
 International search report

Change: 940608 A2 Obligatory supplementary classification  
 (change)

Examination: 950125 A2 Date of filing of request for examination:  
 941130

Examination: 980304 A2 Date of despatch of first examination report:  
 980120

LANGUAGE (Publication,Procedural,Application): English; English; English  
 FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF2	1746
CLAIMS B	(English)	200204	1138
CLAIMS B	(German)	200204	1002
CLAIMS B	(French)	200204	1309
SPEC A	(English)	EPABF2	7810
SPEC B	(English)	200204	7865
Total word count - document A			9558
Total word count - document B			11314
Total word count - documents A + B			20872

...CLAIMS system according to claim 1 further comprising a plurality of  
 binary sort tree indexes for **indexing** the data elements of at least  
**some** of the entity **fields** into **ordered** arrays, each binary  
**sort** tree **index** covering only a single entity field and including  
 a searchable network of integers arranged in...



15/5,K/10 (Item 10 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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00571754

**Computer user interface for relating key and index properties to database table columns.**

**Rechnerbenutzerschnittstelle, um Zeiger- und Indexeigenschaften mit Kolonnen von Datenbanktabellen zu assoziieren.**

**Interface utilisateur d'ordinateur pour associer des proprietes pointeurs et index a des colonnes dans des tables de bases de donnees.**

PATENT ASSIGNEE:

International Business Machines Corporation, (200120), Old Orchard Road, Armonk, N.Y. 10504, (US), (applicant designated states: AT;BE;CH;DE;ES;FR;GB;IT;LI;NL;SE)

INVENTOR:

Li, Shih-Gong, 9402 Mystic Oaks Trail, Austin, Texas 78750, (US)  
Schrader, Theodore Jack London, 3101 Shoreline Drive, Apt. 1936, Austin, (US)

LEGAL REPRESENTATIVE:

Burt, Roger James, Dr. (52152), IBM United Kingdom Limited Intellectual Property Department Hursley Park, Winchester Hampshire SO21 2JN, (GB)

PATENT (CC, No, Kind, Date): EP 560543 A2 930915 (Basic)  
EP 560543 A3 931118

APPLICATION (CC, No, Date): EP 93301703 930305;

PRIORITY (CC, No, Date): US 848496 920309

DESIGNATED STATES: AT; BE; CH; DE; ES; FR; GB; IT; LI; NL; SE

INTERNATIONAL PATENT CLASS (V7): G06F-015/40;

ABSTRACT EP 560543 A2

A user interface for creating or changing the structure of a relational database having multiple tables linked by keys and arranged by indices. In one form, the invention contemplates the juxtaposed depiction on a computer video display of a matrix defining the structure of a table with one or more matrices defining the linking relationships between selected columns from that and related tables. Selection and movement through the data structure is accomplished by mouse actuated cursor. Referential integrity among the database tables is maintained through the use of primary and foreign keys. The relationships of the keys and indices to the columns of the tables are clearly represented in matrix format windows which appear concurrently with table column property information. (see image in original document)

ABSTRACT WORD COUNT: 127

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 930915 A2 Published application (A1with Search Report ;A2without Search Report)

Change: 931006 A2 Representative (change)

Search Report: 931118 A3 Separate publication of the European or International search report

Examination: 940302 A2 Date of filing of request for examination: 931227

Withdrawal: 960612 A2 Date on which the European patent application was withdrawn: 960423

LANGUAGE (Publication,Procedural,Application): English; English; English

FULLTEXT AVAILABILITY:

Available Text	Language	Update	Word Count
CLAIMS A	(English)	EPABF1	273
SPEC A	(English)	EPABF1	7153
Total word count - document A			7426
Total word count - document B			0
Total word count - documents A + B			7426

...SPECIFICATION for the Index Key and Foreign Key matrices. As shown, for

each Name in the **Index** List numerous **sets** of **Column** Name and **Sort Order** pairs are possible. In the case of the Foreign Key list, numerous column Names are...

15/5,K/11 (Item 11 from file: 348)  
DIALOG(R)File 348:EUROPEAN PATENTS  
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00543065

System and method for efficient execution of outer join operations.  
System und Verfahren zum effektiven Durchfuehren von ausseren  
Verbindungsoperationen.  
Systeme et procede pour l'execution effective d'operations de jonction  
exterieures.

PATENT ASSIGNEE:

INTERNATIONAL BUSINESS MACHINES CORPORATION, (200125), Old Orchard Road,  
Armonk, N.Y. 10504, (US), (applicant designated states: DE;FR;GB)

INVENTOR:

Cheng, Josephine Miu-Kung, 1248 Valley Quail Circle, San Jose, California  
95120, (US)

Mohan, Chandrasekaran, 727 Portswood Drive, San Jose, California 95120,  
(US)

Pirahesh, Mir Hamid, 1282 Quail Creek Circle, San Jose, California 95120,  
(US)

LEGAL REPRESENTATIVE:

Burt, Roger James, Dr. (52152), IBM United Kingdom Limited Intellectual  
Property Department Hursley Park, Winchester Hampshire SO21 2JN, (GB)

PATENT (CC, No, Kind, Date): EP 529916 A2 930303 (Basic)

EP 529916 A3 931020

APPLICATION (CC, No, Date): EP 92307535 920818;

PRIORITY (CC, No, Date): US 749088 910823

DESIGNATED STATES: DE; FR; GB

INTERNATIONAL PATENT CLASS (V7): G06F-015/40;

CITED PATENTS (EP A): EP 421408 A

CITED REFERENCES (EP A):

2ND INTERNATIONAL SYMPOSIUM ON DATABASES IN PARALLEL AND DISTRIBUTED  
SYSTEMS 2 July 1990, DUBLIN, IRELAND pages 211 - 218 A. CHEN :

'Outerjoin optimization in multidatabase systems'

IEICE TRANSACTIONS vol. E73, no. 8, August 1990, TOKYO JP pages 1351 -  
1360 CHANG H. ET AL : 'Performance Evaluation of the Hybrid Join'

SOFTWARE PRACTICE & EXPERIENCE. vol. 17, no. 10, October 1987, CHICHESTER  
GB pages 701 - 717 W. BULLERS, JR. : 'A Processing Algorithm for  
Master-Detail Records in a Relational Database';

ABSTRACT EP 529916 A2

A data processing system and method are described for performing an  
outer join of database tables without sorting the inner table (T(sub 2)).  
The data processing system comprises: means for storing tables consisting  
of a plurality of tuples having multiple columns; means for performing an  
outer join operation on two such tables, one table being an inner table  
for the operation and the other table being an outer table, the outer  
table being ordered or **indexed** in a **sorted** sequence on a selected  
**set of columns**, the system being characterised by: means, responsive  
to values in the selected set of columns of the outer table, for  
determining a plurality of responsibility regions in the inner table such  
that every tuple in the inner table belongs to one and only one  
responsibility region; means for processing the tuples of the inner table  
in each responsibility region by outputting all tuples which belong to  
the responsibility region; whereby the system is capable of outputting  
all tuples of the inner table in the output of the join operation without  
requiring sorting of the inner table. Additional techniques for parallel  
execution of the outer join operation and for applying the outer join  
operation to subqueries are described. (see image in original document)

ABSTRACT WORD COUNT: 210

LEGAL STATUS (Type, Pub Date, Kind, Text):

Application: 930303 A2 Published application (A1with Search Report  
;A2without Search Report)

Examination: 930825 A2 Date of filing of request for examination:  
930624  
Change: 931006 A2 Representative (change)  
Search Report: 931020 A3 Separate publication of the European or  
International search report  
Withdrawal: 960821 A2 Date on which the European patent application  
was withdrawn: 960626  
\*Assignee: 970205 A2 Applicant (transfer of rights) (change):  
International Business Machines Corporation  
(200120) Old Orchard Road Armonk, N.Y. 10504  
(US) (applicant designated states: DE;FR;GB)  
LANGUAGE (Publication,Procedural,Application): English; English; English

...ABSTRACT operation and the other table being an outer table, the outer  
table being ordered or **indexed** in a **sorted** sequence on a selected  
**set** of **columns**, the system being characterised by: means, responsive  
to values in the selected set of columns...

15/5,K/19 (Item 19 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
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00841992 \*\*Image available\*\*

**STORAGE SYSTEM FOR STORING INFORMATION, AND SEARCH SYSTEM FOR SEARCHING INFORMATION**

**SYSTEME DE STOCKAGE D'INFORMATION ET SYSTEME DE RECHERCHE D'INFORMATION**

Patent Applicant/Inventor:

DE VRIES Frens Henri, Stadsring 244, NL-3811 HS Amersfoort, NL, NL  
(Residence), NL (Nationality)

Legal Representative:

GRIEBLING O (agent), Exter Polak & Charlouis B.V., P.O. Box 3241, NL-2280  
GE Rijswijk, NL,

Patent and Priority Information (Country, Number, Date):

Patent: WO 200175672 A1 20011011 (WO 0175672)

Application: WO 2001NL214 20010315 (PCT/WO NL0100214)

Priority Application: NL 1014652 20000315

Designated States:

(Protection type is "patent" unless otherwise stated - for applications prior to 2004)

AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ  
EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS  
LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ  
TM TR TT TZ UA UG US UZ VN YU ZA ZW

(EP) AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE TR

(OA) BF BJ CF CG CI CM GA GN GW ML MR NE SN TD TG

(AP) GH GM KE LS MW MZ SD SL SZ TZ UG ZW

(EA) AM AZ BY KG KZ MD RU TJ TM

Main International Patent Class (v7): G06F-017/30

Publication Language: English

Filing Language: Dutch

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 7894

**English Abstract**

The invention describes a search system with a database which is classified into a plurality of levels. At each level, an overview of the classes which lie one level lower and can be accessed from the current class is projected onto a screen. The user can reach one of these classes which lie one level lower at any time by clicking on the correct location in the overview provided. The overviews are projected onto a stationary background, which is divided into boxes, so that the background remains the same when moving to a subsequent level. At all levels, the number of classes which can be reached therefrom is equal. If this number is equal to 20, the database can contain 160,000 subjects which can be accessed by means of only four mouse clicks.

**French Abstract**

L'invention concerne un systeme de recherche fonctionnant avec une base de donnees dont la classification est realisee selon de nombreux niveaux. A chaque niveau, une vue d'ensemble des classes du niveau inferieur, auxquelles il est possible d'accéder a partir de la classe en cours, est projetee sur un ecran. L'utilisateur peut atteindre l'une de ces classes de niveau inferieur en cliquant sur l'emplacement correct de la vue d'ensemble projetee. Les vues d'ensemble sont projetees sur un arriere-plan fixe, divise en boites, de facon que l'arriere-plan reste le meme lorsqu'on change de niveau. A tous les niveaux, le nombre de classes auxquelles on peut avoir acces est le meme. Si ce nombre est egal a 20, la base de donnees peut contenir 100000 informations auxquelles on peut acceder au moyen de seulement quatre clics de souris.

Legal Status (Type, Date, Text)

Publication 20011011 A1 With international search report.  
Publication 20011011 A1 Before the expiration of the time limit for  
amending the claims and to be republished in the  
event of the receipt of amendments.  
Examination 20020117 Request for preliminary examination prior to end of  
19th month from priority date

Fulltext Availability:  
Detailed Description  
Claims

#### Detailed Description

... main class index field 31 which includes the main  
class index NH, a sub-class **index** field 32 which includes the  
sub- **class index** NR, a **group index field** which includes the  
group  
**index** NG, and a text field 38 which includes text which will be  
referred to as...

#### Claim

... also comprises a group file with group records (30),  
each group record (30) comprising a **group** text field (38)  
and a predetermined number of classification index fields  
(31o, 32, 33),  
the...

...50) comprising a main class text  
field (58) and a predetermined number of classification  
index **fields** (51),  
the **number** of classification index **fields** (51) of the main  
class records (50) being less than the **number** of  
**classification index fields** (41, 42) of the sub- **class**  
records (40).

12 Storage system according to any one of claims 8-11,, in  
which the **number of classification index fields** (21, 22,

23 24) of the subject records (20) is equal to four.

13 Storage...

15/5,K/22 (Item 22 from file: 349)  
DIALOG(R)File 349:PCT FULLTEXT  
(c) 2006 WIPO/Univentio. All rts. reserv.

00501652 \*\*Image available\*\*

**AN INTEGRATED GRAPHICAL USER INTERFACE METHOD AND APPARATUS FOR MAPPING  
BETWEEN OBJECTS AND DATABASES  
PROCEDE ET EQUIPEMENT RELATIFS A UNE INTERFACE GRAPHIQUE UTILISATEUR  
INTEGREE POUR MAPPAGES OBJETS/BASES DE DONNEES**

Patent Applicant/Assignee:

NG Tony Chun Tung,  
SHARMA Rahul,  
LEARMONT Timothy R,

Inventor(s):

NG Tony Chun Tung,  
SHARMA Rahul,  
LEARMONT Timothy R,

Patent and Priority Information (Country, Number, Date):

Patent: WO 9933004 A1 19990701

Application: WO 98US27245 19981221 (PCT/WO US9827245)

Priority Application: US 9768415 19971222; US 98106046 19980629

Designated States:

(Protection type is "patent" unless otherwise stated - for applications  
prior to 2004)

AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GD GE GH  
GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN  
MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG UZ VN YU ZW  
GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH CY DE DK  
ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN GW ML MR NE  
SN TD TG

Main International Patent Class (v7): G06F-017/30

Publication Language: English

Fulltext Availability:

Detailed Description

Claims

Fulltext Word Count: 9716

English Abstract

A graphical user interface on a computer system is provided for displaying objects in an object-oriented application and data stored in tables of a database. The graphical user interface displays a class view corresponding to one or more classes in the object-oriented application that in turn corresponds to tables in the database and displays a table view having one or more tables in a database corresponding to classes in the object-oriented application. In addition, the graphical user interface also displays a combination table-and-class view having database elements from the database adjacent to the object-oriented elements from the object-oriented application.

French Abstract

L'invention porte sur l'interface graphique utilisateur d'un systeme informatique servant a presenter des objets dans une application orientee objet et des donnees stockees dans les tables d'une base de donnees. L'interface graphique utilisateur affiche un synopsis de classes correspondant a une ou plusieurs classes de l'application orientee objet qui a son tour correspond a des tables de la base de donnees et presente le synopsis d'une ou plusieurs tables d'une base de donnees correspondant a des classes de l'application orientee objet. De plus, l'interface graphique utilisateur presente une combinaison de tables et de synopsis de classes comportant des elements de la base de donnees voisine des elements orientes objet de l'application orientee objet.

Fulltext Availability:

Detailed Description

#### Detailed Description

... Index group tab I 1 16 enables a user to view, create, and edit an **index** group. The user creates **index groups** by selecting **fields** in a **class** for **indexing**. **Index** groups are used to **index** columns in tables corresponding to the fields. The indexed columns increase the underlying database search...



Set	Items	Description
S1	5972671	COLUMN? ? OR FIELD? ?
S2	25283	(SET OR SETS OR GROUP? ? OR COLLECTION? ?) (3W) S1
S3	52081	(SOME OR SELECTION OR FEW OR NUMBER OR QUANTITY OR SEVERAL- ) (3W) S1
S4	975	(SORT? ? OR SORTED OR SORTING OR ORDER? ? OR ORDERED OR ORDERING OR ARRANGE? ? OR ARRANGING ) (5N) (S2 OR S3)
S5	1485	(CATEGORI?E? ? OR CATEGORI?ING OR CATEGORY OR CATEGORIES OR CATEGORI?ATION OR CLASS OR CLASSES OR CLASSIFICATION OR CLASSIFY OR CLASSIFIES OR CLASSIFIED OR CLASSIFYING) (5N) (S2 OR S-3)
S6	9755	(MARK? ? OR MARKED OR MARKING OR FLAG? ? OR FLAGGED OR FLAGGING) (10N) S1
S7	326	(INDEX OR INDEXING OR INDEXED) (10N) (S2 OR S3)
S8	531	(MINI OR SECOND OR 2ND OR ANOTHER OR EXTRA OR SUB OR AUXILIARY OR SUPPLEMENTARY OR SUB) () INDEX
S9	0	(S4 OR S5) AND S6 AND (S7 OR S8)
S10	36	(S4 OR S5) AND (S7 OR S8)
S11	32	S10 NOT PY>2003
S12	21	RD (unique items)
File	8: Ei Compendex(R)	1970-2006/Feb W2 (c) 2006 Elsevier Eng. Info. Inc.
File	35: Dissertation Abs Online	1861-2006/Jan (c) 2006 ProQuest Info&Learning
File	65: Inside Conferences	1993-2006/Feb W3 (c) 2006 BLDSC all rts. reserv.
File	2: INSPEC	1898-2006/Feb W2 (c) 2006 Institution of Electrical Engineers
File	94: JICST-Eplus	1985-2006/Nov W4 (c) 2006 Japan Science and Tech Corp (JST)
File	111: TGG Natl. Newspaper Index(SM)	1979-2006/Feb 13 (c) 2006 The Gale Group
File	6: NTIS	1964-2006/Feb W1 (c) 2006 NTIS, Intl Cpyrght All Rights Res
File	144: Pascal	1973-2006/Jan W5 (c) 2006 INIST/CNRS
File	434: SciSearch(R)	Cited Ref Sci 1974-1989/Dec (c) 1998 Inst for Sci Info
File	34: SciSearch(R)	Cited Ref Sci 1990-2006/Feb W2 (c) 2006 Inst for Sci Info
File	62: SPIN(R)	1975-2006/Jan W5 (c) 2006 American Institute of Physics
File	99: Wilson Appl. Sci & Tech Abs	1983-2006/Jan (c) 2006 The HW Wilson Co.
File	95: TEME-Technology & Management	1989-2006/Feb W3 (c) 2006 FIZ TECHNIK
File	56: Computer and Information Systems Abstracts	1966-2006/Jan (c) 2006 CSA.
File	57: Electronics & Communications Abstracts	1966-2006/Jan (c) 2006 CSA.

12/5/4 (Item 4 from file: 2)

DIALOG(R)File 2:INSPEC

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04373570 INSPEC Abstract Number: B89036619, C89030165

**Title: ANOVA model fitting via sparse matrix computations: a fast direct method**

Author(s): Ostrouchov, G.

Author Affiliation: Math. Sci. Section, Oak Ridge Nat. Lab., TN, USA

Journal: SIAM Journal on Scientific and Statistical Computing vol.10,  
no.1 p.58-71

Publication Date: Jan. 1989 Country of Publication: USA

CODEN: SIJCD4 ISSN: 0196-5204

Language: English Document Type: Journal Paper (JP)

Treatment: Theoretical (T)

Abstract: A fast and storage-efficient direct method for fitting analysis-of-variance models to unbalanced data is presented. This method exploits sparsity and rank deficiency of the model matrix and is based on orthogonal Givens factorization of a **set** of sparse **columns** of the model matrix. A **class** of matrices generated by **index** sets is defined and used to obtain results on linear dependencies between columns of a model matrix and fill during factorization. These results are used to develop an algorithm for the selection, **ordering**, and symbolic factorization of a **set** of sparse **columns** of the model matrix. This facilitates a fast and storage-efficient numerical factorization and solution. A comparison to both a standard direct algorithm and a general-purpose sparse least-squares algorithm shows that the new algorithm reduces time and storage by orders of magnitude for large models and is competitive for small models. (20 Refs)

Subfile: B C

Descriptors: matrix algebra; statistical analysis

Identifiers: ANOVA model; sparse matrix computations; fast; storage-efficient; fitting; analysis-of-variance models; orthogonal Givens factorization; model matrix; linear dependencies; numerical factorization

Class Codes: B0240 (Probability and statistics); B0290H (Linear algebra); C1140 (Probability and statistics); C4140 (Linear algebra)

12/5/5 (Item 5 from file: 2)

DIALOG(R)File 2:INSPEC

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03639366 INSPEC Abstract Number: C86024982

**Title: Producing an index with your microcomputer database manager**

Author(s): Jonassen, D.

Author Affiliation: Sch. of Educ., North Carolina Univ., Greensboro, NC, USA

Journal: Collegiate Microcomputer vol.3, no.4 p.375-81

Publication Date: Nov. 1985 Country of Publication: USA

CODEN: CMICDL ISSN: 0731-4213

Language: English Document Type: Journal Paper (JP)

Treatment: Practical (P)

Abstract: The production of indexes has been greatly facilitated by computers. Recently a number of sophisticated indexing programs have become available for microcomputers, however these are normally expensive and single-purpose. The article describes a procedure for using commonly available database management systems for producing indexes on microcomputers. After marking the text to be **indexed**, the indexer needs to **set** up a three- **field** database, type in the entries, **sort** the database on all three fields, and finally configure and print out a report of the index. This is another of many useful applications of perhaps the most useful utility available for microcomputers. (3 Refs)

Subfile: C

Descriptors: database management systems; indexing; microcomputer applications; sorting

Identifiers: microcomputer applications; database manager; indexing; database management systems; three-field database

Class Codes: C6130 (Data handling techniques); C6160 (Database management systems (DBMS)); C7240 (Information analysis and indexing)

Set	Items	Description
S1	5452403	COLUMN? ? OR FIELD? ?
S2	49762	(SET OR SETS OR GROUP? ? OR COLLECTION? ?) (3W) S1
S3	122804	(SOME OR SELECTION OR FEW OR NUMBER OR QUANTITY OR SEVERAL- ) (3W) S1
S4	1938	(SORT? ? OR SORTED OR SORTING OR ORDER? ? OR ORDERED OR OR- DERING OR ARRANGE? ? OR ARRANGING ) (5N) (S2 OR S3)
S5	6270	(CATEGORI?E? ? OR CATEGORI?ING OR CATEGORY OR CATEGORIES OR CATEGORI?ATION OR CLASS OR CLASSES OR CLASSIFICATION OR CLA- SSIFY OR CLASSIFIES OR CLASSIFIED OR CLASSIFYING) (5N) (S2 OR S- 3)
S6	36057	(MARK? ? OR MARKED OR MARKING OR FLAG? ? OR FLAGGED OR FLA- GGING) (10N) S1
S7	849	(INDEX OR INDEXING OR INDEXED) (10N) (S2 OR S3)
S8	2849	(MINI OR SECOND OR 2ND OR ANOTHER OR EXTRA OR SUB OR AUXIL- IARY OR SUPPLEMENTARY OR SUB) () INDEX
S9	1	(S4 OR S5) (30N) S6 (30N) (S7 OR S8)
S10	48	(S4 OR S5) (30N) (S7 OR S8)
S11	47	S10 NOT PY>2003
S12	39	RD (unique items)
File	88:	Gale Group Business A.R.T.S. 1976-2006/Feb 14 (c) 2006 The Gale Group
File	369:	New Scientist 1994-2006/Aug W4 (c) 2006 Reed Business Information Ltd.
File	160:	Gale Group PROMT(R) 1972-1989 (c) 1999 The Gale Group
File	635:	Business Dateline(R) 1985-2006/Feb 18 (c) 2006 ProQuest Info&Learning
File	15:	ABI/Inform(R) 1971-2006/Feb 20 (c) 2006 ProQuest Info&Learning
File	16:	Gale Group PROMT(R) 1990-2006/Feb 20 (c) 2006 The Gale Group
File	9:	Business & Industry(R) Jul/1994-2006/Feb 16 (c) 2006 The Gale Group
File	13:	BAMP 2006/Feb W2 (c) 2006 The Gale Group
File	810:	Business Wire 1986-1999/Feb 28 (c) 1999 Business Wire
File	610:	Business Wire 1999-2006/Feb 21 (c) 2006 Business Wire.
File	647:	CMP Computer Fulltext 1988-2006/Mar W1 (c) 2006 CMP Media, LLC
File	98:	General Sci Abs 1984-2004/Dec (c) 2005 The HW Wilson Co.
File	148:	Gale Group Trade & Industry DB 1976-2006/Feb 20 (c) 2006 The Gale Group
File	634:	San Jose Mercury Jun 1985-2006/Feb 18 (c) 2006 San Jose Mercury News
File	275:	Gale Group Computer DB(TM) 1983-2006/Feb 20 (c) 2006 The Gale Group
File	47:	Gale Group Magazine DB(TM) 1959-2006/Feb 20 (c) 2006 The Gale group
File	75:	TGG Management Contents(R) 86-2006/Feb W2 (c) 2006 The Gale Group
File	636:	Gale Group Newsletter DB(TM) 1987-2006/Feb 20 (c) 2006 The Gale Group
File	624:	McGraw-Hill Publications 1985-2006/Feb 21 (c) 2006 McGraw-Hill Co. Inc
File	484:	Periodical Abs Plustext 1986-2006/Feb W2 (c) 2006 ProQuest
File	613:	PR Newswire 1999-2006/Feb 21 (c) 2006 PR Newswire Association Inc
File	813:	PR Newswire 1987-1999/Apr 30 (c) 1999 PR Newswire Association Inc
File	141:	Readers Guide 1983-2004/Dec

(c) 2005 The HW Wilson Co  
File 239:Mathsci 1940-2006/Mar  
(c) 2006 American Mathematical Society  
File 370:Science 1996-1999/Jul W3  
(c) 1999 AAAS  
File 696:DIALOG Telecom. Newsletters 1995-2006/Feb 17  
(c) 2006 Dialog  
File 553:Wilson Bus. Abs. 1982-2004/Dec  
(c) 2005 The HW Wilson Co

12/3,K/5 (Item 5 from file: 88)

DIALOG(R)File 88:Gale Group Business A.R.T.S.  
(c) 2006 The Gale Group. All rts. reserv.

01606220 SUPPLIER NUMBER: 03435147

**Files & Folders: functional and flexible. (evaluation)**

Poor, Alfred

PC Magazine, v3, p64(1)

Sept 18, 1984

DOCUMENT TYPE: evaluation LANGUAGE: English RECORD TYPE: Fulltext

WORD COUNT: 678 LINE COUNT: 00058

... also specify up to 125 fields as sort keys. Files & Folders uses a B-tree **index** system, so you can have your file **sorted** on a **number** of different **fields** at one time.

The manual is one of the package's weakest points. It has...

12/3,K/9 (Item 1 from file: 16)  
DIALOG(R)File 16:Gale Group PROMT(R)  
(c) 2006 The Gale Group. All rts. reserv.

06898610 Supplier Number: 58378565 (USE FORMAT 7 FOR FULLTEXT)  
**Virage, Obvious handle multimedia on the Web.(Internet World trade show, in  
New York)(Industry Trend or Event)**  
Cavanagh, Luke  
The Seybold Report on Internet Publishing, v4, n3, pNA  
Nov, 1999  
Language: English Record Type: Fulltext  
Document Type: Newsletter; Trade  
Word Count: 952

... to these two products, Video Search Tools, that allows the  
administration of large storehouses of **indexed** video. It can help **sort**  
results in a **number** of **fields**, define customized searches and can be  
customized to integrate with pre-existing systems.  
Converging for...

1 12/3,K/11 (Item 1 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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08263462 SUPPLIER NUMBER: 17529098 (USE FORMAT 7 OR 9 FOR FULL TEXT)

**A way to weave an untangled Web page.(ZyLab's ZyIndex for Internet Web  
authoring software) (Software Review)(Evaluation)**

Rapoza, Jim

PC Week, v12, n44, p98(1)

Nov 6, 1995

DOCUMENT TYPE: Evaluation ISSN: 0740-1604 LANGUAGE: English

RECORD TYPE: Fulltext; Abstract

WORD COUNT: 1063 LINE COUNT: 00084

... s WordPerfect, and Xyquest's XyWrite, as well as basic ASCII files.  
After building the **index**, we used ZyIndex to **set** up **category fields**  
and save common searches (which ZyLAB calls "Concepts") so Web users could  
perform them quickly...



12/3,K/13 (Item 3 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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06461129 SUPPLIER NUMBER: 13746250 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Stayin' alive. (Borland International Inc.'s dBASE IV 2.0 data base  
management system) (Software Review) (includes related articles on dBASE  
IV for Windows, on competitors and on satisfaction of complaints about  
version 1.5)(Cover Story) (Evaluation)**

Evans, Phil

PC User, n209, p32(5)

April 21, 1993

DOCUMENT TYPE: Evaluation ISSN: 0263-5720 LANGUAGE: ENGLISH

RECORD TYPE: FULLTEXT; ABSTRACT

WORD COUNT: 2962 LINE COUNT: 00222

... staggering. The bulk of my testing was done on a table containing  
295,000 records. **Sorting** that table on one of **several indexed fields**  
is so fast that I was unable to time it using a stopwatch. The longest...

12/3,K/16 (Item 6 from file: 148)  
DIALOG(R)File 148:Gale Group Trade & Industry DB  
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04492736 SUPPLIER NUMBER: 08236721 (USE FORMAT 7 OR 9 FOR FULL TEXT)  
**Glossary of frequently used technical terms. (glossary)**  
Laserdisk Professional, v3, n1, p51(4)  
Jan, 1990  
DOCUMENT TYPE: glossary ISSN: 0896-4149 LANGUAGE: ENGLISH  
RECORD TYPE: FULLTEXT  
WORD COUNT: 2650 LINE COUNT: 00203

... output flexibility favors the SEGMENTED FILE, since a record can be  
re-composed with any **set** of **FIELDS** in any **order** .

**GLOBAL INDEX**

A composite **index** formed from all of the FIELD INDEXES plus  
searchable terms from untagged sections of the...

12/3,K/24 (Item 8 from file: 275)  
DIALOG(R)File 275:Gale Group Computer DB(TM)  
(c) 2006 The Gale Group. All rts. reserv.

01120248 SUPPLIER NUMBER: 00625488

**PractiCorp Demonstrates New Program.**

Computer Retail News, n101, p74

May 13, 1985

DOCUMENT TYPE: product announcement ISSN: 0744-673X LANGUAGE:  
ENGLISH RECORD TYPE: ABSTRACT

...ABSTRACT: software can contain records up to 2,000 characters, access three files at once, and **sort** and **index** any **number** of **fields** at one time. PractiBase runs on IBM personal computers and compatibles. It sells for \$99...

12/3,K/35 (Item 10 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2006 American Mathematical Society. All rts. reserv.

02126712 MR 90b#65085

**ANOVA model fitting via sparse matrix computations: a fast direct method.**

Ostrouchov, George (Engineering Physics and Mathematics Division, Oak

Ridge National Laboratory, Oak Ridge, Tennessee, 37831)

Corporate Source Codes: 1-ORNL-EP

SIAM J. Sci. Statist. Comput.

Society for Industrial and Applied Mathematics. Journal on Scientific  
and Statistical Computing, 1989, 10, no. 1, 58--71. ISSN: 0196-5204

CODEN: SIJCD4

Language: English

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: MEDIUM (15 lines)

Reviewer: Summary

...rank deficiency of the model matrix and is based on orthogonal Givens factorization of a **set** of sparse **columns** of the model matrix. A **class** of matrices generated by **index** sets is defined and used to obtain results on linear dependencies between columns of a...

12/3,K/37 (Item 12 from file: 239)

DIALOG(R)File 239:Mathsci

(c) 2006 American Mathematical Society. All rts. reserv.

01914527 MR 86g#12011

**Classes de Stiefel-Whitney de formes quadratiques et de representations galoisiennes reelles.**

Stiefel-Whitney classes of quadratic forms and real Galois representations

Kahn, Bruno (Department of Mathematics, Harvard University, Cambridge, 02138, Massachusetts)

Corporate Source Codes: 1-HRV

Invent. Math.

Inventiones Mathematicae, 1984, 78, no. 2, 223--256. ISSN:

0020-9910 CODEN: INVMBH

Language: French

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: LONG (35 lines)

Reviewer: Dejter, Italo Jose (1-PRRP)

...26#6228]. The author gives an expression for the real representations and their Stiefel-Whitney **classes**, when  $G$  is the Galois **group** of a **field** and  $H$  a closed subgroup of finite **index**. If  $F$  is a commutative field of characteristic  $\neq 2$ ,  $F$  is a separable...

12/3,K/38 (Item 13 from file: 239)

DIALOG(R)File 239:Mathsci

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01880914 MR 85k#81143

**Group fields, gravity, and angular momentum.**

Williams, J. G.

Finkelstein, David (Department of Mathematics, Georgia Institute of Technology, Atlanta, 30332, Georgia)

(Williams, Jeffrey George)

Corporate Source Codes: 1-GAIT

Internat. J. Theoret. Phys.

International Journal of Theoretical Physics, 1984, 23, no. 1, 61--66. ISSN: 0020-7748 CODEN: IJTPBM

Language: English

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: MEDIUM (16 lines)

Reviewer: Dodson, C. T. J. (4-LANC)

...a light cone orientation in  $\mathbb{R}^3 \times \mathbb{R}$  and indexed by the homotopy class of a group field with  $G = \mathrm{SO}(3)$ . A similar argument extends the result to spacetimes like  $\mathbb{S}^2 \times \mathbb{R}$ .